

Idaho National Engineering and Environmental Laboratory

Solid-Phase Materials for the Selective Recovery of Copper from Iron-Containing Aqueous Streams

This technology is a new class of solid phase materials that will selectively remove copper from acidic aqueous solutions. It has direct application to the copper mining industry, but also in biotech, medical, electronics, water treatment and nuclear industries.

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Technology Description:

This technology is a new class of solid phase materials that will selectively remove copper from acidic aqueous solutions. These materials are selective for copper II in the presence of iron III and are directly applicable both to the copper mining and copper plating industries. This invention also entails effective synthetic strategies for the formation of these materials in high purity and high yield. The technology has been proven but is in early development stages.

Potential Applications:

Copper and copper plating, electronics, biotech, medical, ultrapure water treatment, and nuclear. Solvent extraction and electrowinning.

Perceived Advantages Of The INEEL

Technology:

Use of this technology would eliminate a hazardous waste stream, and represents savings in terms of labor and efficiency.